The fluorescence intensity of the copolymer particles (monomer-derivatized, fluorescein-tagged MAb and HEMA) was shifted over 28 channels. The fluorescence intensity scale (x axis) is logarithmic, and a shift of 28 channels corresponded to a three-fold increase in fluorescence intensity. This dramatic increase in the fluorescence intensity provided conclusive evidence that the monomer-derivatized, fluorescein-tagged MAb was integrally incorporated into the polymer particles.

From the foregoing, it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.

We claim:

1. A method of selectively removing substances from a solution or mixture, comprising:

covalently bonding a polymerizable organic monomer to a polypeptide that has binding activity to the substance to form a monomer/polypeptide conjugate;

contacting the substance with the monomer/-polypeptide conjugate; and

polymerizing the monomer/polypeptide conjugate to form an insoluble polymer which can be separated from the solution.

2. The method of claim 1 wherein the substance to be removed is an antigen, the polypeptide is an antibody, and the solution or mixture is aqueous.

3. The method of claim 1 wherein the monomer/-polypeptide conjugate is homopolymerized.

4. The method of claim 1 wherein the monomer/-polypeptide conjugate is copolymerized with additional nonderivatized organic monomers.

5. The method of claim 4 wherein the nonderivatized monomer is one selected from the group consisting of at least one ethylenically and/or acetylenically unsaturated monomer and/or multifunctional cross-linking compound.

* * * * *